

What We Claim Is:

1. A computer system comprising

means for computing a data flow graph comprised the following components

a plurality of operators in computer readable memory, each of which defines operation programming for performing an operation,

one or more communication ports, each of which is either an input port for providing the operation programming a data stream of one or more records, or an output port for receiving a data stream of one or more records from the operation programming, and

one or more data objects, each of which is capable of supplying or receiving a data stream of one or more records,

a datalink associated with each of one or more of the communication ports of the operators in said graph, each of which defines a communication path for the communication of a data stream of records between its associated communications port and either a specific data object or the specific communication port of another specific operator in said graph; and

visualization means including

means for receiving varying performance information about the state of the computation of said data flow graph at each of varying points of time and at each of various components of said data flow graph, and

means for providing a graphic representation of said data flow graph as a graphic network including said operators and connecting datalinks, including means for providing at each of varying points of time a representation of said varying information relating to each of said various components at a location in said graphic representation corresponding to the location of said component in said graphic representation.

2. A computer system as in claim 1 wherein one or more of said operators is a parallelizable operator and said means for computing a data flow graph includes means for parallelizing the execution of said data flow graph including:

parallelizing the execution of individual parallelizable operators in said graph by causing a separate instance of each such operator, including its associated operation programming, to be run on each of multiple processors, with each instance of a given operator

having a corresponding input and output port for each input and output port of the given operator; and

dividing the data stream associated with a datalink connected to the communication port of a given parallelized operator into a separate data stream partition connected to the corresponding communication port of each instances of the given operator.

3. The computer system of claim 2 wherein said means for providing a graphic representation includes means for providing a graphic representation of the individual instances of a parallelized operator and of the individual data stream partitions connected to the one or more communication ports of that operators and providing said varying information about the flow of records on data stream partitions connected to the communication ports on each of a plurality of instances of a given parallelized operator.

4. A computer-implemented method comprising:
executing a plurality of processes in parallel to process data;
displaying graphical representations of the processes and the flow of the data through the processes as the data is processed by the processes.

5. Computer-readable medium storing instructions, wherein the instructions, when executed, produce following actions:
execute a plurality of processes in parallel to process data;
display graphical representations of the processes and the flow of the data through the processes as the data is processed by the processes.